DOCUMENT RESUME

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TITLE	Applying the Structured Tutoring Model in Math I. Description of Teacher Inservice Education Materials.
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ABSTRACT

The home study course described is for adults who are interested in developing skills in tutoring primary students in beginning mathematics. An outline is given of the contents of the course, and a description of the activities and resources involved in the course is provided. Ordering information for materials and a critique of the course are included. (JD)

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DESCRIPTION OF TEACHER IN-SERVICE EDUCATION MATERIALS

A. SUMMARY INFORMATION

Title: APPLYING THE STRUCTURED TUTORING MODEL IN MATH I

Publication Date(s): 1975

Intended Users: Adults interested in tutoring an individual child (parent, teacher, aide, high school or college age volunteer)

Grade Level(s): K-3

Number: Individual

Primary Focus: Expertise in how to teach children mathematical concepts, computational skills is highlighted.

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School subject(s) and/or in-service topic(s) covered:

The program covers techniques and procedures developed for individual tutoring in modern math in the primary grades. Mastery of basic mathematical concepts are developed which include readiness concepts, basic, simple and complex addition and subtraction, simple and complex multiplication.

What participant does in using the materials:

This program is a home study course designed for individual use. The participant follows an assignment designated for each unit. These are mailed to Brigham Young University, Dept of Home Study for evaluation and then returned. Successful mastery of the 15 units completes the course and a letter grade given with 2 semester hours credit.

Resources:

The program consists of a study guide, text, flash cards and "Assignments to be Submitted" pad. This is essentially a correspondence course which is fully self-contained. The student will be required to tape a practice session with a child and a discussion with another individual. A cassette recorder is needed. Directions for each of the 15 units are clearly given.

Describer critique:

The program offers guidance and instruction to those individuals willing to give their time to individual tutoring. It can possibly make the difference between just willing help and valuable instruction. If an individual completes this program, there is little doubt they will be of great help in any classroom or to an individual child.

(ECE) (Ma) - drill activities - computational skills

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B. IN-DEPTH INFORMATION

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1.0 PURPOSES:

This program is based on the approach to tutoring which accepts the principals established by the author known as structured tutoring. It proposes to train the student in the use of established psychological principles of learning and in validated tutoring techniques and procedures. The purpose of this program is to use the structured tutoring model with the teaching of modern math.

The modern math program attempts to instill understanding in the young child of the operations he or she is performing. It is the contention of the authors that more complex abstractions in math can be understood only if the child has mastered the basics. Addition, subtraction, and multiplication make up the core of the instructional sequence.

The ultimate purpose of Beginning Math I is not only to allow children to master the basic operations, but also to give them increased confidence in working with numbers. Since confidence can best result from numerous repeated successes, the manual has been specifically designed to insure a high rate of success for the learner. It is hoped that the new confidence the child gains from being tutored will give him an increased desire to learn more math.

2.0 CONTENT — Scope and Sequencing of Topics:

The course consists of 15 lessons outlined in the study guide and developed in the text. Each lesson follows this format: (1) behavioral objective specified, (2) directions given by steps, (3) if any aspect of an assignment involved a specific form which is to be submitted, the form will be so designated.

The 15 lessons:

1. Why Basic Math?
2. Getting Acquainted with the Manual
3. General Tutoring Techniques and Procedures
4. Flash Card Drills
5. Self-Teaching of Math Facts
6. Pretesting
7.-12. Tutoring
13. Maintaining Records
14. Posttesting
15. Learning Gains Summary

3.0 ACTIVITIES AND RESOURCES INVOLVED IN USE OF PRODUCT

3.1 Description of main in-service activities:

This program is a home study course designed for individual use. The participant follows the assignments designated for each unit in the study guide. These consist of various activities, always including text assignments. Other activities can be write-ups of a discussion on specified topics, taped (cassette) tutoring of a child and written responses to questions on each unit. These are mailed in to Brigham Young University, Dept of Home Study, for evaluation and are then returned. Successful mastery of the 15 units completes the course and a letter grade given with 2 semester hours credit.

3.2 Help given in use of product:

The study guide clearly explains the procedures to be followed in the course. Each unit has directions listed under the heading, "How to Proceed." An "Assignments to be Submitted" pad is enclosed which has appropriate forms for each unit. Directions are well-given. A cassette tape recorder is needed.

4.0 EVALUATION OF TEACHER INSERVICE LEARNING

The course outline and study guide contain specific criteria for each unit. In each lesson the behavioral objectives are specified and the minimal criteria that will be accepted as evidence of mastery is specified on a criteria check sheet. Each of the 15 lesson assignments is submitted to the instructor when completed. This is evaluated and returned. Completion of the 15 lessons completes the course with a final grade.

5.0 ORDERING INFORMATION

5.1 Resources required/recommended:

The material required and contained in the unit consists of: the course outline, the text, math facts flash cards, and the assignments to be submitted pad. These cover the basic parts of the course. Other resources such as another individual for discussions, a student for the taped lesson which must be submitted and a tape cassette recorder are needed.

5.2 Distributor name/address:

Dept of Home Study
210 HRCB
Brigham Young University
Provo, Utah 84602
(801) 374-1211, ext 2868

5.3 Components/approximate costs:

Component	Purchase	Rental	No. Req.	Reusable
APPLYING THE STRUCTURED TUTORING MODEL IN MATH I				
Tuition (2 units) Educ. 514Rx(25) Includes course study guide; assignments to be submitted pad.	$49.00	No	1	No
Text: Beginning Math I: A Professional Guide for the Lay Tutor	12.00	No	1	Yes
Math Facts Flash Cards				

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6.0 HISTORY OF DEVELOPMENT

6.1 Identification of the developer:

Grant Harrison, B.A., Brigham Young University, M.A., Adams State College, Colorado, Ed.,D., UCLA. Dr. Harrison worked as a project associate and consultant for the Institute for Educational Development, El Segundo, California, and as a human factors analyst with the Systems Development Corporation in Santa Monica, California. He is now a faculty member at Brigham Young University. He has become an expert in the tutorial field, developing several tutorial systems designed to utilize students as tutors for younger children. He has also authored numerous texts.

6.2 How developed and when:

Dr. Harrison has conducted a series of experiments over the past 7 years pertaining to the benefits of tutoring students. He has found structured tutoring as opposed to tutoring per se can benefit students. It is these findings that led to the development of his Structured Tutoring Model, applied in this course to elementary math.

6.3 Evidence of effectiveness with users:

The research has included a four-year series of studies evaluating the use of para-professionals (college students and teacher aides) and non-professionals (students and parents) as tutors. Primarily, this work has focused on the validation of specific tutoring techniques and tutor training procedures. The techniques described in this guide, the most valuable and effective developed by the author, have been validated in several replicated experiments.

C. DESCRIBER CRITIQUE

Appropriateness / adaptability / technical quality:

This material has been developed into a very well-constructed program. It is appropriate for any individual desiring to develop techniques used in tutoring primary children. It is suggested for use with a child who needs additional help at this level and not as a total substitute for a math program. However, it is a total program which when completed would result in a complete K-3 modern math curriculum.

The technical quality is good; all parts are well-developed.

Content accuracy/social fairness/community acceptance issues:

The program is well-structured and presents the program as described. The complex abstractions of modern math are well-developed.

There is no race, sex, or ethnic bias evident.

Community acceptance would probably be positive. The material is intended for non-professional as well as professional use and is geared to any adult desiring to successfully help a child. Parents as well as interested parties will find this helpful.

Overall summary/comment:

Individuals looking for material on tutoring will find this course helpful. It is based on structured tutoring techniques and procedures which have been well-evaluated. The program is so constructed; each step is introduced and explained and appears to be within the capabilities of most adults. It has potential uses in many places. It can be offered to parents or volunteers who wish to give their time to individual tutoring. It appears to make the amateur an effective tutor in this situation.

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